

REMARKS

Claims 1-13 are all the claims pending in the application. Claims 1-13 presently stand rejected.

The Examiner has acknowledged Applicant's claim for foreign priority; however, the Examiner has indicated that Applicant has not filed the certified copy of the French application. Applicant filed a Submission of Priority Document with a certified copy of the French application on August 15, 2001. A copy of the submission is enclosed, as well as a copy of the OIPE date-stamped filing receipt. The Examiner is respectfully requested to acknowledge receipt of the Priority Document in the next communication from the office.

Claims 1-13 are rejected under 35 U.S.C. § 112, second paragraph. Applicant amends the claims to remove any ambiguities. With respect to the meaning of "transformed", Applicant notes that page 4 of the specification explains how the basic mixture is transformed by passing over a cold cylinder.

Claims 1, 2, 4, 5 and 8-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Keogh (4,407,992) in view of EP 721001.

Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Keogh (4,407,992) in view of EP 721001 as applied to claims 1, 2, 4, 5 and 8-10, and further in view of Nitta et al. (6,075,086).

Claims 6 and 7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Keogh (4,407,992) in view of EP 721001 as applied to claims 1, 2, 4, 5, and 8-10, and further in view of Schombourg et al. (6,448,343).

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Claim 13 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Keogh (4,407,992) in view of EP 721001, as applied to claims 1, 2, 4, 5 and 8-10, and further in view of Ruepping (6,346,300).

Claims 1-5 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Igarashi et al. (5,149,732) in view of Keogh (4,407,992) and either Nitta et al. (6,075,086) or Abe et al. (5,296,273).

Claims 6 and 7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Igarashi et al. (5,149,732) in view of Keogh (4,407,992) and either Nitta et al. (6,075,086) or Abe et al. (5,296,273) as applied to claims 1-5 and 8, and further in view of Schombourg et al. (6,448,343).

Claims 1-5 and 8-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Coaker et al. (5,036,121) in view of EP 721001 and either Nitta et al. (6,075,086) or Abe et al. (5,296,273).

Claims 6, 7, 11 and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Coaker et al. (5,036,121) in view of EP 721001 and either Nitta et al. (6,075,086) or Abe et al. (6,296,273) as applied to claim 1-5 and 8-10, and further in view of Schombourg et al. (6,448,343).

Claim 13 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Coaker et al. (5,036,121) in view of EP 721001 and either Nitta et al. (6,075,086) or Abe et al. (6,296,273) as applied to claims 1-5 and 8-10, and further in view of Reupping (6,346,300).

Claims 1-3, 5, 8, 9 and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over GE 2,016,016 in view of EP 721001.

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over GB 2,106,016 in view of EP 721001 as applied to claims 1-3, 5, 8, 9 and 13, and further in view of Coaker et al. (6,036,121).

Claim 6, 7, 11 and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over GB 2,106,016 in view of EP 721001 as applied to claims 1-3, 5, 8, 9 and 13, and further in view of Schombourg et al. (6,448,343).

Analysis

Claim 1 is the only claim in independent form; therefore, the following discussion is initially directed to this independent claim.

Claim 1 is directed to an extrudable and curable insulating composition that is resistant to oil and to propagating fire. The composition comprises a basic mixture, and amino-silane for curing the basic mixture. The basic mixture contains: (1) chlorinated polyolefin, (2) for 100 parts by weight thereof, 100 to 250 parts by weight of a mineral filler containing moisture, and (3) an agent for treating said filler by reacting with the moisture contained therein.

Claim 1 is rejected as being obvious over the combination of Keogh and EP '001. Keogh relates to a flame retardant composition for manufacturing electrical conductors.

This composition comprises :

1. an alkylene-alkyl acrylate copolymer,
2. a halogenated flame retardant additive: *chlorinated polyolefin (5 to 20%)*

3. an oxide, hydroxide, carbonate or sulfate of calcium or magnesium coated with hydrophobic material for example organo silane: *mineral filler (2.5 to 12%) and agent for treating the filler*
4. a antimony oxide as a second flame retardant additive.

Thus, Keogh fails to teach or suggest (1) a composition which comprises amino-silane, and (2) the proportions in weight of chlorinated polyolefin and mineral filler are different from the claimed invention.

EP '001 discloses a two-pack, crosslinking aqueous adhesive.

The composition comprises:

1. an adhesive component comprising an aqueous emulsion of a polymer, for example an aqueous emulsion of a *chlorinated polyolefin*,
2. a curing component, for example *aminosilane 1 to 20%*.

The Examiner argues that it is obvious to one of ordinary skill in the art to use amino-silane from EP '001 in the composition disclosed in Keogh.

However, the proportions in weight of chlorinated polyolefin and mineral filler are different than the claimed invention. In the invention, for 100 parts by weight of chlorinated polyolefin, 100 to 250 parts by weight of a mineral filler containing moisture are provided. In all the examples provided in Keogh, there is 50 parts of filler (or less) for 100 parts of polyolefin.

The advantage of these new proportions is better flame resistance and an easier extrusion process. It has been found to provide a good compromise between physical properties and flame resistance.

The advantage of using amino-silane is to avoid pre-reticulation during mixing, to have a stockable product before extrusion, and to obtain the best friability during extrusion.

In view of the foregoing, the combination of Keogh and EP '001 fails to render claim 1 obvious.

Claim 1 is also rejected as being obvious in view of Igarashi, Keogh and Nitta or Abe. Igarashi is directed to a composition for a cable. Igarashi fails to disclose the particular combination of elements as recited in claim 1. In particular, claim 1 recites a basic mixture of chlorinated polyolefin, mineral filler, and a filler agent. This basic mixture and a curing amino-silane comprise the insulating composition.

Igarashi fails to disclose a chlorinated polyolefin and mineral filler in the recited proportions. Even though the secondary references Nitta and Abe disclose mineral fillers, there is no teaching or suggestion for arriving at the claimed proportions. As mentioned above, Keogh also fails to disclose the claimed proportions.

Thus, claim 1 is not rendered obvious by the combination of Igarashi, Keogh, Nitta and Abe.

Claim 1 is also rejected as being obvious in view of Coaker, EP '001, and Nitta or Abe. Coaker is directed to a composition that includes chlorinated polyolefin; however, this reference fails to disclose the addition of amino-silane, or a treating agent for the filler. As mentioned above, the other cited references fail to disclose the claimed proportions for the recited elements. Still further, the other cited references fail to teach or suggest that the amino-silane should be provided separately from the basic mixture of other ingredients.

With respect to the motivation to arrive at the claimed proportions, since no one of the cited references discloses the combination of elements, one would not have been motivated to arrive at the claimed proportions of elements unless one were afforded the benefit of Applicant's own disclosure since there is no teaching or suggestion that the particular proportion of CPE and treating agents would provide the result that would be obtained by this result-effective variable.

In view of the foregoing, claim 1 is not rendered obvious by the combination of Coaker, EP '001, Nitta and Abe.

Finally, claim 1 is rejected as being obvious in view of GB '016 and EP '001. GB '016 is directed to a composition which includes CPE, however, this reference fails to disclose the proportions in weight of chlorinated polyolefin and mineral filler. In the invention, there is 100 parts by weight of chlorinated polyolefin and 100 to 250 parts by weight of a mineral filler containing moisture. In contrast, GB '016 discloses 10-50 parts by weight of chlorinated polyolefin. Also, GB '016 does not disclose the addition of amino-silane to the basic mixture. Although EP '001 discloses amino-silane even if the references were combined one would still fail to arrive at the claimed proportions discussed above.

In view of the foregoing, claim 1 is patentable.

The remaining rejections are directed to the dependent claims. These claims are patentable for at least the same reasons as claim 1 above, by virtue of their dependency therefrom.

Moreover, claim 9 has been rewritten into independent form. This claim is additionally patentable because none of the cited references teaches or suggests, alone or in combination, a

method of preparing the claimed composition. In particular, the composition is prepared by mixing the chlorinated polyolefin, filler and treatment agent together to obtain the basic uniform mixture, then transforming the mixture, and finally adding amino-silane to the transformed mixture during an extrusion step.

The method of forming this composition is patentable because none of the cited references teach this method. This method provides the important benefit of allowing the amino-silane to react directly with the chlorinated polyolefin without being deactivate din any way by the filler, so as to be grafted to the chlorinated polyolefin without giving off hydrochloric acid. According to the invention, the composition can be formulated easily and quickly, using a conventional extruder, at moderate cost, while still satisfying rigid fire resistance standards.

In view of the foregoing, claim 9 is patentable. In addition, claims 10-13 are patentable due to their dependency therefrom.

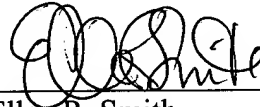
Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Ellen R. Smith
Registration No. 43,042

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE



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PATENT TRADEMARK OFFICE

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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

1. (Amended) An extrudable and curable insulating composition that is resistant to oil and to propagating fire, the composition [comprising a chlorinated polyolefin and a curing amino-silane, and] comprising:

 a basic mixture; and

 an amino-silane for curing said basic mixture,

 wherein said basic mixture contains [containing said] chlorinated polyolefin, and for 100 parts by weight [thereof] of said chlorinated polyolefin, 100 to 250 parts by weight of a mineral filler containing moisture and an agent for treating said mineral filler by reacting with the moisture contained therein [, an said amino-silane].

2. (Amended) A composition according to claim 1, wherein said agent for treating said filler is a silane compound that is [substantially] inert relative to said chlorinated polyolefin.

9. (Amended) A method of preparing [the] an extrudable and curable insulating composition that is resistant to oil and to propagating fire, the composition including a basic mixture, and an amino-silane for curing said basic mixture, wherein said basic mixture contains chlorinated polyolefin, and for 100 parts by weight of said chlorinated polyolefin, 100 to 250

parts by weight of a mineral filler containing moisture and an agent for treating said mineral filler by reacting with the moisture contained therein [according to claim 1], comprising:
[consisting in]

mixing the following together while heating them: said chlorinated polyolefin, said filler, and said treatment agent, thereby obtaining said basic mixture which has been made uniform,

transforming said basic mixture, [and then transformed, and in]

adding said amino-silane to said transformed basic mixture during extrusion [thereof] of said basic mixture.

11. (Amended) A method according to claim 9, wherein [consisting in mixing] said transformed basic mixture and a solid auxiliary polymeric compound containing said amino-silane[,] are mixed in an extruder hopper.

12. (Amended) A method according to claim 9, [consisting in injecting] wherein said amino-silane is injected onto said transformed basic mixture having an auxiliary polymeric compound added thereto which adsorbs said injected amino-silane almost instantaneously, in an extruder hopper.